GARY R. HERBERT
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Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

April 19, 2013

Kirk Nicholes
Alton Coal Development, LLC
463 North 100 West, Suite 1
Cedar City, Utah 84720

Subject: Change in Mining Sequence, Alton Coal Development LLC, Coal Hollow Mine, C/025/0005, Task ID #4323

Dear Mr. Nicholes:

The Division has completed a review of change in mining sequence amendment that was received on April 3, 2013. A copy of the technical review is attached. The mining sequence change amendment is hereby approved and we are returning a stamped, "incorporated" copy for your files.

Timely pit closure will minimize groundwater discharge into pits and protect the groundwater. In numerous sections of the CHIA and Chap 7 of the MRP pit closure is discussed and it is stated that "individual mine pits will typically remain open for less than about 60 to 120 days (measured from the time the mining of the pit is completed to the time the pit is backfilled)." Pits 17-21 are on the edge of the alluvial groundwater discharge area A and the MRP specifically discusses alluvial groundwater discharge area A. Part of the protection for Area A is that the pits will not be open longer than 120 days. During a meeting on March 27, 2013 the Division discussed this issue with you and re-iterated that this amendment does not grant additional time to the backfilling and grading requirements of R645-301-553.

ACD's request for an exemption from the requirements of R645-301-553 for Pits 16 through 21 under the preferred reclamation scenario is acknowledged by the Division, but is not approved at this time. Both the Division and Alton Coal understand that to be in compliance with the MRP, the mining pits shall remain open no longer than 120 days.

Sincerely,

Daron R. Haddock
Coal Program Manager

DRH/PWB/ss
Enclosures
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UTAH DNR
OIL, GAS & MINING

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

April 16, 2013

TO: Internal File

FROM: Priscilla Burton, Team Lead

RE: Change in Mining Sequence, Coal Hollow Mine, Alton Coal Development, LLC, Kane County, C/025/0005, Task ID #4323

SUMMARY:

This amendment responds to deficiencies identified in the first review of Task 4254. The information provided meets the requirements of the Utah Coal Rules and is recommended for approval and incorporation into the MRP.

The April 3, 2013 revision extends the expected mine life to 2017 (Year 6) and describes two concurrently active pit areas in the NE1/4 and SE ¼ of Section 30, beginning in Year 3 (2013) as shown on Dwg 5-10. The change in mining sequence rearranges the progress of mining and reclamation. The application describes a preferred reclamation scenario wherein reclamation of Pits 16-22 is delayed until overburden from the adjacent BLM Lease By Application area is available. The mined out Pits 16-22 will be 32 acres in size, requiring 3,300,000 loose cubic yards to reclaim the 1,500 ft. x 875 ft area. The "Alternative," bonded scenario is to re-handle the Excess Spoil pile to backfill Pits 16 - 22.

ACD's request for an exemption from the requirements of R645-301-553 for Pits 16 through 21 is acknowledged by the Division, but cannot be approved at this time.

TECHNICAL ANALYSIS:

OPERATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Analysis:

Topsoil Removal and Storage

Mine pits and mining sequence are described in Section 523. Annual topsoil removal is shown on Dwg 5-2 Disturbance Sequence. Overburden removal is shown on Dwg 5-16. Operational sequence and contemporaneous reclamation sequence is shown on Dwg 5-10, and Dwgs 5-17 through 5-19. The Permittee references years of mining on Dwg 5-10. The permit was issued in December 2009. Coal was first mined in 2011. The current year, 2013, is the third year of mining. Dwg. 2-2 illustrates topsoil removal and storage locations as well as the source of topsoil live-haul for contemporaneous reclamation sites by year of mining. The legend in Dwg 2-2 has been revised to follow the mining sequence described in the application and shown on Dwgs. 5-2 Disturbance Sequence.

Note: all engineering drawings have a scale of 500 ft/inch, whereas soils drawings Dwg 2-1 and 2-2 are scaled at 400 ft/inch.

The locations of five topsoil stockpiles and two subsoil piles are shown on Drawing 2-2. A portion of the Subsoil Pile #2 and 2/3 of Topsoil pile #3 were utilized on Stage 1 of the Excess Spoil Reclamation pile. The remainder of Topsoil pile #3 will be used in reclamation of the Excess Spoil reclamation in the spring/summer of 2013, leaving four topsoil stockpiles at the site.

Dwg 5-2 shows the 45 acres of topsoil salvage in 2013, which includes the access road west of pits 16 - 28, the surface acreage of 9, 27 and 28 and Pond #4. Sample locations for this topsoil are shown on Dwg 2-1. Using the average soil salvage depth for this area of 8 inches, a total of 47,916 cu yds will be salvaged and live hauled. Dwg. 5-38 highlights 36 acres to be reclaimed in 2013. The average topsoil replacement depth is 8 - 9 inches of topsoil (Sections 233.100 and 240). Therefore, the 36 acres will require 38,322 cu yds of topsoil. The 2013 reclamation area will utilize the remainder of topsoil pile #3 (approximately 10,000 cu yds) and half of topsoil pile #4 (56,000 cu yds) or live haul. Dwg 2-2 shows Topsoil Pile #5 and Subsoil pile #3 as a storage locations for topsoil and subsoil that cannot be live hauled.

According to the approved plan, stored topsoil expected to remain in place for one year or longer must be mulched and seeded in accordance with the fugitive dust control plan and the soil

handling plans. If Topsoil pile #4 and Subsoil Pile #2 are not utilized in 2013, they should be seeded and mulched in accordance with Section 231.100. Stockpiles to be left in place less than one year will be treated with a tackifier (Section 244.100). The surfaces of all stockpiles will be roughened by gouging, pocking or ripping (Section 244.100).

Appendix C of Appendix 2-1 provides a summation of the laboratory data from soil sample sites.

Findings:

The application meets the requirements of the topsoil handling requirements of the Utah Coal Rules, R645-301-230.

AIR POLLUTION CONTROL PLAN

Regulatory Reference: 30 CFR 784.26, 817.95; R645-301-244, -301-420.

Analysis:

The application describes the mining of 1 million tons/year or less of coal. In compliance with R645-301-424, the fugitive dust control plan, found in Appendix 4-5, required by R645-301-423 states that during operations the Permittee will stabilize exposed surface areas using mulch and tackifier (R645-301-244.100); will minimize and control erosion of regraded areas (and topsoil and subsoil piles) and will control sediment contributions to streams from stockpiles (R645-301-244.320 and R645-301-526.220, *et seq*), using tackifier or surface roughening, mulch, and vegetation (R645-301-244.300).

The App. 4-5 fugitive dust control plan includes the following:

- Mulch or tackifier application for unseeded topsoil/subsoil stockpiles.
- Seeding of topsoil stockpiles in existence longer than one year.
- Tackifier on graded, unseeded reclamation areas.
- Water sprays (as needed) for material handling points (crushing, screening, transfer, loading, dumping); for excavation and pushing activities; for construction and demolition; for drilling and blasting;and for cleared areas.
- Water sprays or chemical treatment or gravel as needed on unpaved roads and yard areas.
- Synthetic cover on haul truck beds as needed.
- Coarse gravel at entrances to and exits from public roads.

In compliance with R645-301-425, the fugitive dust control plan in App 4-5 describes monitoring of fugitive dust from material storage, material handling, haul roads, yard areas, and cleared, leveled, unvegetated areas. The App. 4-5 monitoring program includes the following:

- The site supervisor will periodically observe the dust at the permit boundary to determine the level of control needed.
- Level 1, 0 – 5% opacity at the permit boundary triggers increased watering frequency and an application of magnesium chloride on the Out of Pit haulroads.
- Level 2, 5 – 10% opacity will result in even more water and/or magnesium chloride applications
- Level 3, Greater than 10% at the permit boundary triggers increased watering frequency and an application of magnesium chloride on the Out of Pit haulroads.
- Production will stop if dust cannot be reduced to 5 – 10% opacity.
- Records of watering will be provided in the Annual report.

The Applicant has documented email communication with the DEQ/DAQ concerning this application.

Findings:

The information provided meets the Air Quality permitting requirements of the Utah Coal Mining Rules.

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

Analysis:

Drawing 5-2, Disturbance Sequence, shows the areas to be disturbed in each year of coal recovery.

Drawing 5-10, Coal Removal Sequence, shows the anticipated yearly progression and pit alignment. Refer to this Drawing for pit numbers.

Drawing 5-16 shows the overburden removal sequence.

Drawings 5-17, 5-18 and 5-19 show the sequence of reclamation in three stages. Dwg 5-17 shows the Stage 1 reclamation and calculates 58 acres reclaimed and 7,936,000 LCY overburden moved from Pits 1 - 8. At the completion of Stage 2 reclamation, Dwg 5-18 shows the active pit locations to be pits 14 – 15 and pits 22 & 23, with 94 acres reclaimed and 14,168,000 LCY overburden moved from Pits 9 - 13 and 23 - 28. At the completion of Stage 3

reclamation, Dwg 5-19 shows 32 acres in Pits 16 - 22 as active, 111 acres reclaimed, and 14, 631,000 LCY overburden moved. The legend of Dwg 5-19 indicates that the 3,300,000 LCY of fill required for backfilling Pits 16 - 22 will come from the Excess Spoils Pile under the bonded scenario and from the LBA under the Preferred Scenario.

Drawing 5-3 shows three phases of reclamation, but does not provide acreage for the phases. Phase 3 reclamation corresponds to Stage 3 backfill and Stage 3 remaining pit areas shown on Dwg 5-19. (Please note: the Phase number refers to a separately bonded, coal recovery area as shown on Dwg 5-3, and Stage number refers to reclamation progression as shown on Dwgs 5-17 through 5-19.)

Dwg 5-38 shows the reclamation sequence by year, with final reclamation of all surface areas including the facilities yard and the active Stage 3 pit occurring in the final year, 2017. The three phases of bonding are shown on Dwg 5-3. As shown on these two drawings, the Phase 1 bond area will not be eligible for release until after completion of the backfilling and grading of the Phase 1 bonded area in 2017, but Phase 2 bond will be eligible earlier, as the Phase 2 area will be backfilled and graded in 2015.

The Permittee has provided two options for the reclamation of the final pit area. The first option is to obtain leases outside the proposed permit boundary, and use spoil from the new leases to reclaim the final pit area of the proposed Coal Hollow permit boundary. This is the Applicant's preferred scenario and the final topography under this preferred scenario is shown on Dwgs. 5-35 and 5-36. These drawings have not changed with this submittal. The preferred reclamation scenario for Pits 16-22 is based on ACD being the successful bidder on the adjacent federal leases. Map 1-2, Project Area LBA shows the location of the Alton Coal LBA federal leases that must be acquired through the bidding process. If Alton Coal Development cannot obtain the federal leases, then they will proceed with the alternative reclamation scenario shown on Dwg 5-37 and 5-37A.

Were ACD to be the successful bidder on the Alton Coal LBA, the addition of those leases would be a significant revision to the Coal Hollow Mining permit and the preferred scenario could be approved at that time.

ACD has mentioned the possible need for a Temporary Cessation status approval by the Division should coal recovery from Pits 16-21 be completed prior to all permitting approvals being in place for the permit expansion. The Division will process any application made by ACD for a Temporary Cessation status as expeditiously as possible, and will meet the permitting time frame for significant revisions established under R645-300-131.111.1.

Findings:

The information provided meets the requirements of the maps, plans and cross sections of the Utah Coal Rule.

BACKFILLING AND GRADING

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

Analysis:

General

The Applicant has requested a variance from the requirements of R645-301-553 to backfill within 60 days or 1500 linear feet of coal removal. Final mining in Pits 22 north to pit 16 (as shown on Dwg 5-19) create a pit that is 1,500 ft x 900 ft in area, approximately 32 acres, and that requires 3,300,000 Loose Cubic Yards of backfill as stated on page 5-66 and 5-67.

The Permittee has provided two options for the reclamation of the final pit area. The Preferred Scenario is to use spoil from the Alton LBA lease area, outside the current permit boundary, to reclaim the final pit area (pits 16 - 22), leaving post mining topography as shown on Dwgs. 5-35 and 5-36. The Alternative Scenario, requires rehandling 3,300,000 LCY of overburden from the Excess Spoil pile to fill pits 16 -22. In this scenario, the post mining topography is shown on Dwgs 5-37 and 5-37A.

Under both scenarios, all areas are expected to be reclaimed by 2017 as Drawing 5-38, Reclamation Sequence illustrates. The preferred scenario depends entirely upon acquiring the Alton LBA. The Division cannot bond for a hypothetical situation. Therefore, the alternative scenario is the bonded scenario. ACD should provide documentation that acquiring the LBA is likely and imminent, within 60 days of coal recovery from pits 18 - 20 (the center of the final pit), to receive an exemption from the requirements of backfilling and grading outlined in R645-301-553.

ACD's request for an exemption from the requirements of R645-301-553 for Pits 16 through 21 is acknowledged by the Division, but cannot be approved at this time.

Findings:

Rough backfilling and grading operations will follow coal removal by not more than 60 days or 1500 linear feet. **No variance has been issued from the requirements of R645-301-**

553. The information provided meets the minimum regulatory requirements of the R645 Coal Mining Rules.

RECOMMENDATIONS:

The application should be approved and incorporated into the MRP.

ACD's request for an exemption from the requirements of R645-301-553 for Pits 16 through 21 is acknowledged by the Division, but cannot be approved at this time.

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TECHNICAL MEMORANDUM
Utah Coal Regulatory Program

April 10, 2013

TO: Internal File

THRU: Priscilla Burton, Environmental Scientist III, Soils, Team Lead
Steve Christensen, Task Manager, Permit Supervisor

FROM: Peter Hess, Environmental Scientist III, Engineering Review

RE: CHANGE IN MINING SEQUENCE, Alton Coal Development, LLC, Coal Hollow Mine, C/025/0005, Task ID #4323

SUMMARY:

The Coal Hollow Mine permit was issued on November 10, 2010. The first coal was mined from pit # 1 in early February, 2011.

The Permittee is proposing to change the order of recovery of coal during Phase 2 from the approved sequence, which is shown on Drawing 5-10, Coal Recovery Sequence.

The proposal would not change the approved sequential numbering of the coal extraction areas, but would change the timing when the coal recovery would occur, (i.e., in the proposed submittal, overburden removal and coal recovery in pits 9-13 would occur in the Phase 2 mining, at the same time as the overburden removal and coal recovery from pits 28-23). Thus the final mining area (Phase 3) would happen in pits 14-15-16 and 22, 21 and 20 during 2015 and in pits 16, 17 and 18 in 2016. Pit 18 is the last pit to be mined.

The submittal proposes two options post- coal recovery in Phase 3, two of which are nearly identical to those addressed in the Master Technical Analysis dated October 15, 2009. The only change is the location of the pits to be left open. They are:

1) Pits 21, 20, 19, 18, 17 and 16 (1480' highwall length) be allowed to remain open until the Permittee can obtain the necessary approvals to permit the Federal coal reserves west of the approved mining area, or

2) Pits 21, 20, 19, 18, 17 and 16 are allowed to remain open;

3) If Alton Coal Development, LLC cannot obtain the necessary approvals to recover coal from the Federal reserves to the west, all fill in the areas where approximate original contour elevations have been exceeded will be re-handled to initiate filling the Phase 3 coal recovery area.

The Task ID # 4254 application was reviewed and returned to the applicant on March 15, 2013 with eight deficiencies, two of which were relative to engineering and reclamation bond estimation.

The Permittee responded to the Division's eight deficiencies on April 2, 2013 with a complete re-submittal of the application (identified as Task ID # 4323). Task ID # 4323 contains revised reclamation cost estimates using unit costs from the "2012 Cost Mine Coal Cost Guide 2012" and the 2013 R.S. Means Heavy Construction Manual.

This technical memo will address the adequacy of the Permittee's response as it relates to R645-301-521.100, Cross Sections and Maps and R645-301-830.140, Detailed Estimated Cost.

TECHNICAL ANALYSIS:

OPERATION PLAN

COAL RECOVERY

Regulatory Reference : 30 CFR 817.59, R645-301-522

Analysis:

Phase 2

The Task ID # 4254 application contains revised pages 5-38, 5-39 and 5-40 which address the proposed Phase 2 and Phase 3 pit recovery sequences (See section 528, **HANDLING AND DISPOSAL OF COAL, OVERBURDEN, EXCESS SPOIL AND COAL MINE WASTE,** Section 528.200, Overburden). Proposed Phase 2 will extend the private coal recovery from the terminus of Phase 1 proceeding to the East where strip ratios are 13.5 / 1 on the average (too high to economically recover with current machinery). Phase 2 will also initiate overburden removal and coal recovery from Pit 28, proceeding North through Pit 23. Thus, mining will occur in two non-adjacent areas during the Phase 2 activity, by leap-frogging the equipment back and forth.

Overburden from Pit 28 will be truck hauled to the excess spoil pile for temporary storage. "Temporary storage" is meant here meaning that this volume of fill will be needed to backfill the Phase 3 coal recovery area, (i.e., Alton Coal Development, LLC will not be able to obtain the adjacent Federal leases to the West of Pits 16-20). Pits 29 and 30 will not be mined, as is shown on the approved version of Drawing 5-10.

Burden from Pit 27 will be used to backfill Pit 28, but it will have to be temporarily stored so an operating area can be established for coal removal.

Phase 2 will recover 14,168,000 LCY of overburden; 8,326,000 LCY will be used as backfill (59 %). The remaining 41 % will be stored as excess spoil, (5,842,000 LCY). A swell factor of 22 % (figure obtained from a recent Caterpillar Handbook) was used to calculate the overburden backfill volumes.

During Stage 2, pits 1, 2, 4, 6, 7, 8, 28, 27, 26, 25 and 24 will be reclaimed (See Drawing 5-19).

Phase 2 will recover approximately 960,000 tons of coal.

The method utilized for coal recovery will not change from the method used in Phase 1. No augering of any highwalls will occur.

Phase 3

The proposed Phase 3 coal recovery program at the Coal Hollow Mine will uncover and strip pits 21, 20, 19, 16 and 17, with the final coal recovery occurring from Pit 18 (See Drawing 5-19, comparing it with Drawing 5-10).

Back filling of adjacent pits 14 and 15, as well as pits 22 and 21 will occur in Stage 3.

Backfilling and the return to approximate original contour of pits 16, 17, 18, 19 and 20 is dependent on which of three options will occur at the end of the mining of the private coal lease. The two options are:

1) Alton Coal Development, LLC will be able to obtain a Federal coal lease to mine the reserves immediately west of pits 16-21, and will use the overburden recovered from the first six pits of the new lease to backfill pits 16-21, or;
2) The adjacent Federal coal leases will not be obtained by Alton Coal Development, LLC and pits 16 through 20 will be backfilled using all of the fill which was temporarily stored above the elevations determined to address the requirements of R 645-301-553.110, Achieve Approximate Original Contour. The Permittee's estimate of the volume of fill needed to reclaim pits 16-21 is 6.3 million yards. The balance of the volume required will need to come from the excess spoil area.

All Phase 3 backfilling will be done via a re-handling process using a shovel-truck(s) combination from all spoil areas utilized. A revised reclamation cost estimate for Phase 3 has been submitted with the Task ID # 4323 submittal.

Drawing 5-10, **Coal Removal Sequence**, as submitted with Task ID # 4323 has had **Note 2** returned to the left hand side of the drawing. The note contains the date of issue of the Coal Hollow permit (November 10, 2010), as well as when the first coal was mined at the site (early February 2011).

Findings:

The Task ID# 4254 application meets the requirements of R645-301-522, Coal Recovery.

Drawing 5-10, as submitted with Task ID # 4323 has had Note 2 (which provides information about the date of permit issue and when the first coal was extracted at Coal Hollow) put back on the drawing. Therefore, in accordance with;

R645-301-521.100, Cross Sections and Maps, Drawing 5-10 (Task ID # 4323) meets the requirements of this section.

ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES

Regulatory Reference: 30 CFR 784.24, 817.150;817.151; R645-301-521; -301-527; -301-534; -301-732.

Analysis:

Road Classification System

Task ID # 4323 does not propose to re-classify any of the roads within the Coal Hollow Mine permit area.

Plans and Drawings

Proposed changes to the two primary coal and spoil haul roads are described on page 5-17, page 5-35 (section 527.200, Description of Roads), and page 5-61. The Mine utilizes three primary roads, two of which are primary haul roads used to transport coal or spoil. A description of each change proposed, and the page correlation is listed below:

1) Page 5-17; The first proposed change is to lengthen the primary haul road which runs from the coal unloading area to the first series of coal recovery pits on the west side of the permit area. The change is a minor lengthening of 200 feet. This road will be used throughout the Mine's production and reclamation phases (through 2017). The second road specification change is a reduction of the length of the second primary haul road, as well as a change to the final point of destination. The route followed by this road will still begin just south of lower Robinson Creek (off of primary haul road 1) and proceed southeast to the long term topsoil stockpile 2 and subsoil stockpile 1. The approval of Task ID # 4323 will reduce the roadway length specification from 2,500 feet to 1,300 feet (a 1,200 foot reduction).

   All of these changes are minor and they should be approved as submitted. There are no changes proposed in the road design specifications, with the exception of the changes in length.

2) Page 5-35, section 527.200, Description of Roads duplicates the revised information submitted on Page 5-17.

Performance Standards

The only performance standard stated under R645-301-560, which includes all mine permitting requirements from R645-301-510 through 553 (including all road permitting

requirements (R645-301-534, Road Designs)), states that "all coal mining and reclamation operations will be conducted in accordance with the approved permit".

The Permittee's mining and reclamation plan commits to meeting all requirements relative to the coal recovery process including road design and construction.

Primary Road Certification

The Task ID # 4254 amendment does not propose to change the classification of any of the three classified primary roads within the permit boundary. Ancillary roads within the mine permit boundary will also remain classified as ancillary.

Other Transportation Facilities

The only other transportation facility at the Coal Hollow Mine is the coal stockpile belt reclaim which puts product into highway trucks for shipment to the buyer.

There are no changes proposed to this facility in Task ID #4254.

Findings:

The Task ID # 4323 application meets the minimum regulatory requirements for Roads, R645-301-521, 527 and 534.

SPOIL AND WASTE MATERIALS

Regulatory Reference: 30 CFR Section R645-301-512, 513, 514, 521, 526, 528, 535, 536, 542, 553.

Analysis:

Disposal of Noncoal Mine Wastes

This requirement is addressed in Volume 3, Chapter 5, Section 528.330, Noncoal Mine Waste, page 5-44 of the mining and reclamation plan.

Coal Mine Waste

Page 5-44 of Chapter 5, Volume 3, Section 528.320, Coal Mine Waste briefly discusses that coal waste will not be generated because no processing is conducted at the mine.

Mine development waste which could be generated during the coal removal process, or from possible highwall failures will be segregated from the run-of-mine product and placed within the backfill used in the reclamation of the pits. Coal mine waste will not be placed within the excess spoil storage areas.

Refuse Piles

There are no refuse piles within the Coal Hollow Mine permit area, and none are planned (See Section 528.320, Page 102 of the Coal Hollow Master Technical Analysis).

Impounding Structures

There are no impoundments constructed of coal mine waste at the Coal Hollow Mine.

Burning and Burned Waste Utilization

The requirements of this section are not applicable to the Task ID #4323 application.

Return of Coal Processing Waste to Underground Workings

As of February 25, 2013, there is no coal processing occurring at the Coal Hollow Mine. Neither are there any underground workings associated with this operation.

Excess Spoil

The design and construction requirements for the currently approved excess spoil storage area are discussed in Volume 3, Chapter 5, Section 528.310, beginning on page 5-40 through page 5-44.

"ACD / LLC has added the recommendations from APPENDIX F, EARTHWORK SPECIFICATIONS to Section 528.310, Chapter 5 of the MRP. Appendix F discusses monitoring of design specifications for the cuts and fills associated with the excess spoil pile construction and the sediment pond embankments to confirm that adequate compaction is being performed during the construction processes. Nine procedure recommendations are listed."

The Applicant described how the excess spoil would be handled in several sections of the PAP, including Sections 526, 528, 535, and 536.

As stated from the Master Technical Analysis prepared by the Division (document date October 15, 2009, pages 104 and 105), *"The pre-topographic maps and the reclamation maps show that the Applicant located the spoil pile in naturally stable areas. Drawing 5-3 and 5-35*

show the areas where excess spoil will be placed. Drawings 5-35 and 5-36 show the design of the fill. Appendix 5-1 is a geotechnical analysis of the sediment impoundments and excess spoil structure prepared by Taylor Geo-Engineering, LLC. The Applicant does not plan on disposing of coal mine waste in the excess spoil pile (521.143).

The excess spoil pile is designed to minimize effects on surface and ground water due to leaching and surface water runoff: design details are in Section 535 (745.100). A spring and seep survey identified no springs or wet weather seeps in the proposed excess spoil area. The location for the excess spoil pile encompasses an area of dry meadow west of County Road 136 (shown on Plate 3-1). This area is identified potentially sub-irrigated (App. 7-7 (p. 10). The soil in the dry meadow area is map unit 6 (Graystone-Cookcan-Jonale Family complex, 1 – 5% slopes) which is described in Chap. 2, page 13 as medium to coarse textured soil with wet conditions. No underdrains are planned for the excess spoil structure. The final surface of the excess spoil pile will be regraded to a contour that will route water from snowmelt and rainfall around the excess spoil (Drawing 5-35). No manmade water courses are present in the excess spoil area (745.100). Although Appendix 5-1, Slope Stability Analysis for Proposed Excess Spoil Structure and Sediment Impoundments states that the eastern 1/3 of the spoil pile can be constructed up to 90 feet in height and up to 120 feet on the western 2/3 portion with 3H:1V slopes, the actual finished design will only climb to a height of 75 to 86 feet on the east end.

Section 535, p. 5-52 states, "Excess spoil will be placed in designated disposal areas within the permit area in a controlled manner. The fill and appurtenant structures will be designed using current, prudent engineering practices and will meet any design criteria established by the Division".

The Applicant provides a revised geotechnical analysis for sediment pond embankments and excess spoil pile in Appendix 5-1, based on the revised design of the spoil. "The revised design of the excess spoil and fill above approximate original contour provides concave slopes that grade from 5h:1v to 4h:1v to 3h:1v, bottom to top. This change in the slope design has allowed for lowering the compaction specification of the spoil to 85 %."

Pages 5-38 and 5-39, section 528.200, Overburden of the Task ID # 4323 application discusses the proposed changes in the Stage 2 and Stage 3 coal recovery areas.

The first change is discussed as follows; "material (the overburden volume) from pits 9-15 significantly exceeds the backfill capacity (volume) available from the preceding pits (Pits 1-8)." The Permittee estimates that excess burden material from pits 9-15 and from pit 28 will be temporarily stored at the excess spoil pile facility (excess burden equals 5,800,000 LCY). This extra material from Stage 2 will require an increase in the length of the spoil facility of 2500 feet more toward the east (average storage volume / foot of pile length is 2,320 LCY / foot).

The second change will be that coal pits 29 and 30 will not be recovered and mining will be initiated in pit 28, proceeding north in the same time frame that pits 9-15 are uncovered and mined. The same machinery will be used to strip and recover the coal from both areas, thus leap frogging will occur back and forth as the mining progresses through Stage 2 (west to east in pits 9-14, and south to north in pits 28 through 23).

Findings:

The change in the timing of the coal recovery from pits 9-13 and 28-23 will not affect the volume of backfill generated by the currently approved coal recovery sequence.

The revised information proposed in Task ID # 4254 adequately addresses the requirements of **R645-301-512, 513, 514, 526, 528, 535, 536, 542, and 553**.

BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Section 800; R645-301-800, et seq.

Analysis:

General

The Coal Hollow Mine utilizes sequential bonding to meet the requirements of R645-301-890. The reclamation costs for most of the coal recovery areas are included in the cost / ton costs from the adjacent pits. The only pit reclamation costs estimated are those for each final pit of Phases 1, 2, and 3.

Form of Bond

The current reclamation bond posted by Alton Coal Development, LLC with the Division and the U.S. Office of Surface Mining is a surety bond posted with Bond Safeguard / Lexon Insurance Companies. The Lexon Insurance Company has an A.M. Best rating of (A-).

Determination of Bond Amount

The current bond amount posted to ensure the reclamation of Stage 1 is $ 6,045,000. The reclamation cost of Stage 1, including reclamation of the mine facilities, reclamation of impoundments 1,1B, 2, 3 and 4, and reclamation of pits 1 – 8 has been estimated at $ 5,882,033.

The Task ID # 4254, **Change in Mining Sequence** application contains reclamation cost estimates for Phase 2 and Phase 3. The submitted estimates were determined as being deficient in the following ways (See Task ID # 4254):

1) The unit costs obtained from the "Cost Mine Coal Cost Guide 2009" and utilized in the Phase 2 and Phase 3 reclamation cost estimates are 4 years old. The Permittee has responded with the submittal of the most current cost guide information from the "Coal Mine Coal Cost Guide for 2012". These unit costs meet the Divisions requirement.

2) The unit costs utilized from the RS Means Heavy Construction Manual 2009 were out of date. Updated unit cost information from the 2013 R S Means was provided to the Permittee on March 5, 2013. The Permittee re-submitted revised reclamation cost estimates using unit cost data from the 2013 R.S. Means Heavy Construction Manual on April 2, 2013, with revised cost estimate sheets on April 5, 2013.

3) An error of at least $50,000 existed for the total cost for Specialized Reclamation Areas in Phases 2 and 3 of the Task ID # 4254 application.
The Permittee's revised reclamation cost estimates for Phase 2 and 3 (as submitted with Task ID # 4323) have corrected this error. The Phase 1 cost for these areas was reported at $ 162,195. The correct amount is $ 212,806.
This deficiency has been addressed.

4) To calculate the indirect costs for Phases 2 and 3, the Permittee only used a 25 % factor to calculate dollar amounts to cover mobe / de-mobe, project management and engineering, and contractor profit and overhead. A factor of 26.8 % must be used according to the OSM Handbook for Bond Estimation. The Permittee submitted new cost estimate sheets using a 26.8 % factor to calculate the indirect costs for Phase 2 and 3, Task ID # 4323.

5) The Task ID # 4254 application proposes that Phase 2 will initiate coal recovery from pits 9-13 at the approximate same time as coal recovery will be initiated from pits 28 to 23. Overburden removal and coal recovery will occur from two areas of the permit area at approximately the same time. <u>The Permittee must discuss how this will affect the incremental bonding which has been calculated for the Phase 2 and Phase 3 increments of the Coal Hollow Mine.</u>

   The Permittee responded in the following way in the re-submittal of Task ID # 4323; *"Bonding for each of the Phases is the worst case scenario for each respective phase. The largest cost is the cost of backfilling the largest open pit(s) during each of the three phases. The bonds (reclamation cost estimate / PHH) represent this in each Phase."* This response adequately addresses the Divisions concern.

6) The escalation factor for 2013 is 1.5 %. This number must be used to escalate both of the cost estimates for Phase 2 and Phase 3 through 2017, which is when all coal recovery and reclamation work is projected to be completed (See Drawing 5-38).

   The Division re-evaluated the escalation costs for Phases 2 and 3 so that the Permittee would benefit from reduced escalation factors. Phase 2 escalation was calculated by using the 2013 factor times .66 (8 months of the year 2013) times the 2013 factor to the fourth power (1.015 X 1.015 X 1.015 X 1.015) for years 2014, 2015, 2016 and 2017 = 1.07187.

   The escalation factor for Phase 3 was calculated by using the 2013 factor (1.015) X 2 years (2016 and 2017) or 1.015 to the second power, (1.015 X 1.015) = 1.03022.

The Permittee has adequately addressed the deficiencies identified in the review of Task ID # 4254 as they related to **R645-301-830.140, Detailed Estimated Cost with Supporting Calculations**.

Several errors were identified in the Phase 1 Reclamation Cost Estimate which was used as a basis for the reclamation bond amount posted to issue the DOGM permit on November 10, 2010. These are identified as follows:

1) In the Phase 1 Reclamation Cost Estimate, the Specialized Areas Reclamation cost estimate had a $ 50,600 error.
2) The Facilities Reclamation Cost ($ 1,395,235) and the Specialized Areas Reclamation Cost ($ 212,806) (Total Amount = $ 1,608,041) was not used when the Indirect Costs for Phase 1 were calculated. The amount which should have been used to calculate the Indirect Cost Amount is $ 4,638,827. The Indirect Cost Amount is calculated to be ($ 4,638,827 X 0.268) = $ 1,243,206. Total Cost = $ 5,882,033.

The Division initiated a mid-term permit review for the Coal Hollow Mine permit on April 2, 2013. That review did not include an evaluation of the reclamation cost estimate and the bond.

The escalation factor for 2013 is 1.015. The escalated dollar amount to ensure adequate bond coverage for the Mine through 2015 (when all reclamation will be completed for Phase 1) is ($ 5,882,033) X (1.015 to the 3rd power (1.0456)) = $ 268,221. The total escalated reclamation cost estimate is **$ 6,150,254**.

The amount of bond currently posted for the Coal Hollow Mine, Phase 1 is $ 6,045,000. The dollar amount difference between the posted bond amount and the escalated reclamation

cost estimate through 2015 is $ 105,000 or – 1.7 %. As this percentage is less than 5 **%, it is not necessary for the Permittee to post additional bond for Phase 1 at this time.**

The reclamation cost estimate for the Phase 2 mining areas at Coal Hollow is estimated at $ 10,554,521. The required bond to be posted for Phase 2 is **$ 10,555,000.**

The reclamation cost estimate for the Phase 3 mining areas at Coal Hollow is estimated at $ 6,972,221. The required bond amount for Phase 3 is **$ 6,972,000**.

Terms and Conditions for LiabilityInsurance

Alton Coal Development, LLC (C/025/005) maintains general liability insurance coverage through the Imperium Insurance Company and American Mining Insurance Company, Inc. Coverage amounts for General Aggregate and Each Occurrence categories are $ 2,000,000 and $ 1,000,000, respectively. Coverage for damage incurred from the use of explosives is provided under the general liability category. The notification clause adequately addresses the requirement to notify the Division should cancellation of any of the insured categories occur before the expiration of coverage is adequate.

Findings:

The Task ID # 4323 application meets the requirements of the R645 Coal Mining Rules.

RECOMMENDATION

The Permittee has addressed all of the engineering requirements previously aired in the review of Task ID # 4254.

This review has determined that the currently posted bond amount is 2% short of the estimated reclamation cost estimate for Phase 1. Since this amount is less than 5%, it is not necessary for the Permittee to post additional bond for Phase 1 at this time.

The estimated reclamation cost for Phase 2 is $10,554,521. The required bond amount which must be posted prior to mining in the Phase 2 areas is **$10,555,000**.

The estimated reclamation cost for Phase 3 is $ 6,972,221. The required bond amount which must be posted prior to mining in the Phase 3 areas is **$6,972,000**.

Task ID # 4323 is recommended for approval.

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

April 18, 2013

TO: Internal File

THRU: Priscilla Burton, Team Lead
Steve Christensen, Permit Supervisor

FROM: Ken Hoffman, Hydrologist

RE: Change in Mining Sequence, Coal Hollow Mine, Alton Coal Development, LLC, C/025/0005, Task ID #4323

SUMMARY:

This amendment responds to deficiencies identified in the first review of Task 4254. The information provided meets the requirements of the Utah Coal Rules and is recommended for approval and incorporation into the MRP.

The April 3, 2013 revision extends the expected mine life to 2017 (Year 6) and describes two concurrently active pit areas in the NE1/4 and SE ¼ of Section 30, beginning in Year 3 (2013) as shown on Dwg. 5-10. The change in mining sequence rearranges the progress of mining and reclamation. The application describes a preferred reclamation scenario wherein reclamation of Pits 16-22 is delayed until overburden from the adjacent BLM Lease By Application area is available. The mined out Pits 16-22 will be 32 acres in size, requiring 3,300,000 loose cubic yards to reclaim the 1,500 ft. x 875 ft area. The "Alternative," bonded scenario is to re-handle the Excess Spoil pile to backfill Pits 16 - 22.

This memo addresses the application's compliance with the hydrology (R645-301-700) section of the Utah Coal Mining Rules. Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules. The application is recommended for approval.

TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

CLIMATOLOGICAL RESOURCE INFORMATION

Regulatory Reference: 30 CFR 779.18, 783.18; R645-301-724.

Analysis:

The MRP addresses climatic information and the change in mining and reclamation does not affect this information.

HYDROLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 701.5, 784.14; R645-100-200, -301-724.

Analysis:

Sampling and Analysis

The MRP addresses sampling and analysis and the change in mining and reclamation does not affect this information.

Baseline Information

The MRP addresses baseline information and the change in mining and reclamation does not affect this information.

Baseline Cumulative Impact Area Information

The MRP addresses baseline cumulative impact area and the change in mining and reclamation does not affect this information.

Probable Hydrologic Consequences (PHC)

In numerous sections[1] of the MRP in Chapter 7 it is discussed that "individual mine pits will typically remain open for less than about 60 to 120 days (measured from the time the mining

[1] Sections 724.500, 728.310, 728.333, and 728.334, and Appendix 7-1 *Investigation of Groundwater and Surface-Water Systems in the 630-Acre Proposed Coal Hollow Mine permit*

of the pit is completed to the time the pit is backfilled)."[2] This language is used as a groundwater protection method to minimize groundwater discharge into pits. Pits 17-21 are on the edge of the alluvial groundwater discharge area A and the MRP specifically discusses alluvial groundwater discharge area A. Part of the protection for Area A is that the pits will not be open longer than 120 days. During a meeting on March 27, 2013 the Permittee assured the Division they understood this amendment does not grant additional time to R645-301-553.

Groundwater Monitoring Plan

The MRP includes an extensive groundwater monitoring network. The proposed amendment should not require additional groundwater monitoring.

Surface-Water Monitoring Plan

The MRP addresses surface-water monitoring plan and the change in mining and reclamation does not affect this information.

Findings:

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules.

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

Analysis:

Monitoring and Sampling Location Maps

The MRP addresses monitoring and sampling location maps and the change in mining and reclamation does not affect this information.

Subsurface Water Resource Maps

Map 2.3.5.2-1 has been updated to include the subsurface water resources in the proposed expansion.

And Adjacent Area; Probable Hydrologic Consequences of Coal Mining; Recommended Monitoring Plan; Potential Alluvial Valley Floor Information; Kane County, Utah

[2] MRP Chapter 7, Section 728.334, Page 7-47

Surface Water Resource Maps

Map 2.3.5.1-1 has been updated to include the surface water resources in the proposed expansion.

OPERATION PLAN

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

Groundwater Monitoring

The MRP includes an extensive groundwater monitoring network. The proposed amendment should not require additional groundwater monitoring.

Surface Water Monitoring

The MRP addresses surface water monitoring and the change in mining and reclamation does not affect this information.

Acid- and Toxic-Forming Materials and Underground Development Waste

The MRP addresses acid and toxic forming materials and the change in mining and reclamation does not affect this information. There no underground development included as part of this amendment.

Transfer of Wells

There are no wells being transferred as part of this amendment.

Discharges Into An Underground Mine

There are no underground mines in the area

Gravity Discharges From Underground Mines

There are no underground mines in the area

Water-Quality Standards And Effluent Limitations

The MRP addresses compliance with water quality standards and effluent limitations and the change in mining and reclamation does not affect this information.

Diversions: General

The MRP addresses compliance with diversion requirements and the change in mining and reclamation does not affect this information.

Stream Buffer Zones

The MRP addresses compliance with stream buffer zones and the change in mining and reclamation does not affect this information.

Sediment Control Measures

The MRP addresses compliance with sediment control measures and the change in mining and reclamation does not affect this information.

Siltation Structures

The MRP addresses compliance with siltation structures and the change in mining and reclamation does not affect this information.

Discharge Structures

The MRP addresses compliance with discharge structures and the change in mining and reclamation does not affect this information.

Impoundments

No impoundments are included as part of the amendment.

Ponds, Impoundments, Banks, Dams, and Embankments

No impoundments, banks, dams, or embankments are included as part of the amendment.

Findings:

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules.

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

Analysis:

Monitoring and Sampling Location Maps

No change to the monitoring locations is proposed in the amendment.

CUMULATIVE HYDROLOGIC IMPACT ASSESSMENT (CHIA)

Regulatory Reference: 30 CFR Sec. 784.14; R645-301-730.

Analysis:

The Draining of Up-Gradient Groundwater Resources section of the CHIA states that "temporary reductions in flow from alluvial aquifers may occur but are likely to be short-lived as the pits will remain open for only 60 to 120 days". If the intent of the operator is to update Chapter 7 to have pits open longer than 120 days then the CHIA will need to be updated accordingly. However, the Permittee has stated that pits will not be open longer than 60 to 120 days so no change is required to the CHIA.

RECOMMENDATIONS:

The application is recommended for approval.

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